

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P198241

Luminaire Tested: **TT-C1-LED-E1-DL-CG-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198241
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C1-LED-E1-DL-CG-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
DRIVE LANE DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3930.3 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U4 - G2

Input Watts (W): 50.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



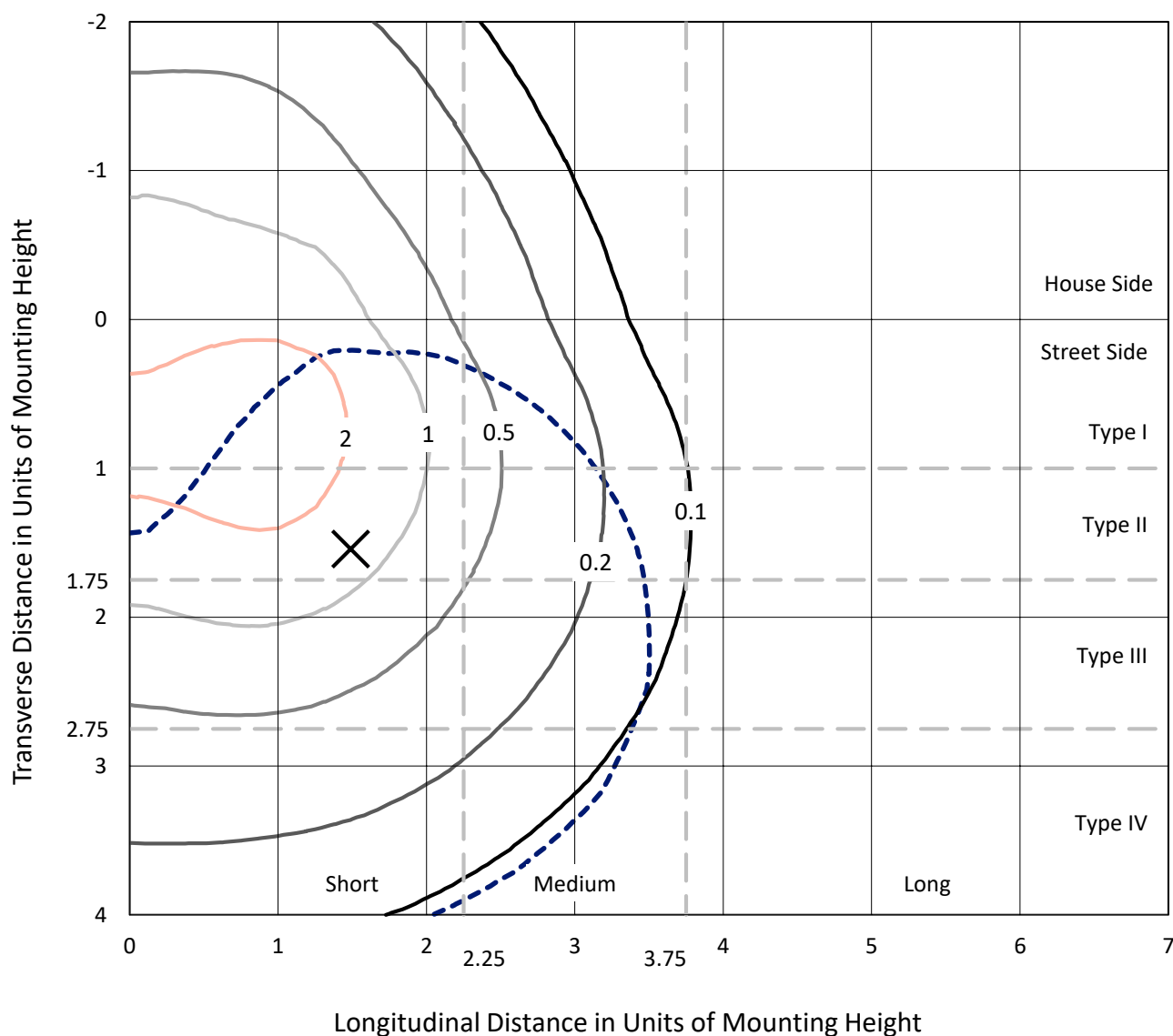
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

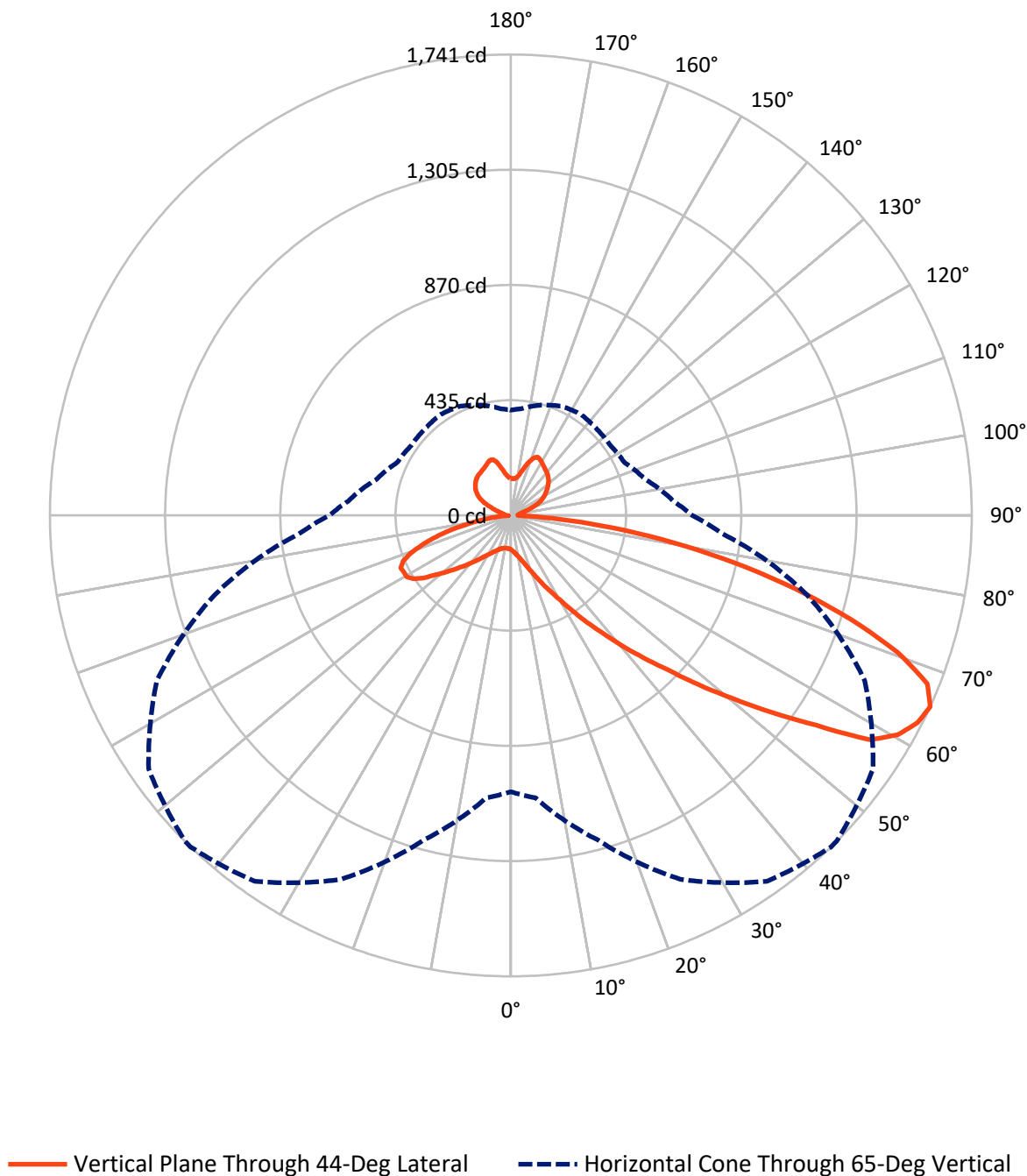


Based on 10 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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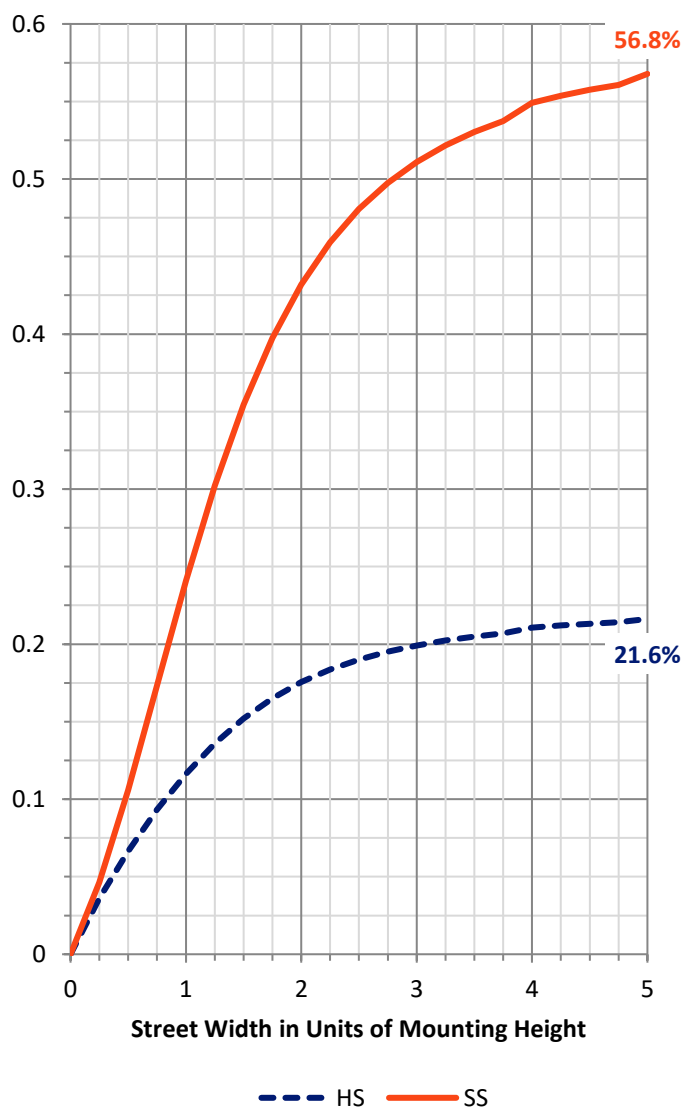
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	859.4	387.3	1246.7
	% Fixture	21.9	9.9	31.7
Street Side	Lumens	2271.0	412.6	2683.6
	% Fixture	57.8	10.5	68.3
Total	Lumens	3130.3	800.0	3930.3
	% Fixture	79.6	20.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.0	0.3
10°-20°	45.5	1.2
20°-30°	102.0	2.6
30°-40°	208.1	5.3
40°-50°	400.2	10.2
50°-60°	695.2	17.7
60°-70°	890.4	22.7
70°-80°	637.6	16.2
80°-90°	138.4	3.5
90°-100°	36.3	0.9
100°-110°	55.2	1.4
110°-120°	110.8	2.8
120°-130°	144.2	3.7
130°-140°	148.0	3.8
140°-150°	133.4	3.4
150°-160°	102.6	2.6
160°-170°	55.1	1.4
170°-180°	14.3	0.4
0°-90°	3130.3	79.6
0°-180°	3930.3	100.0

Coefficient of Utilization



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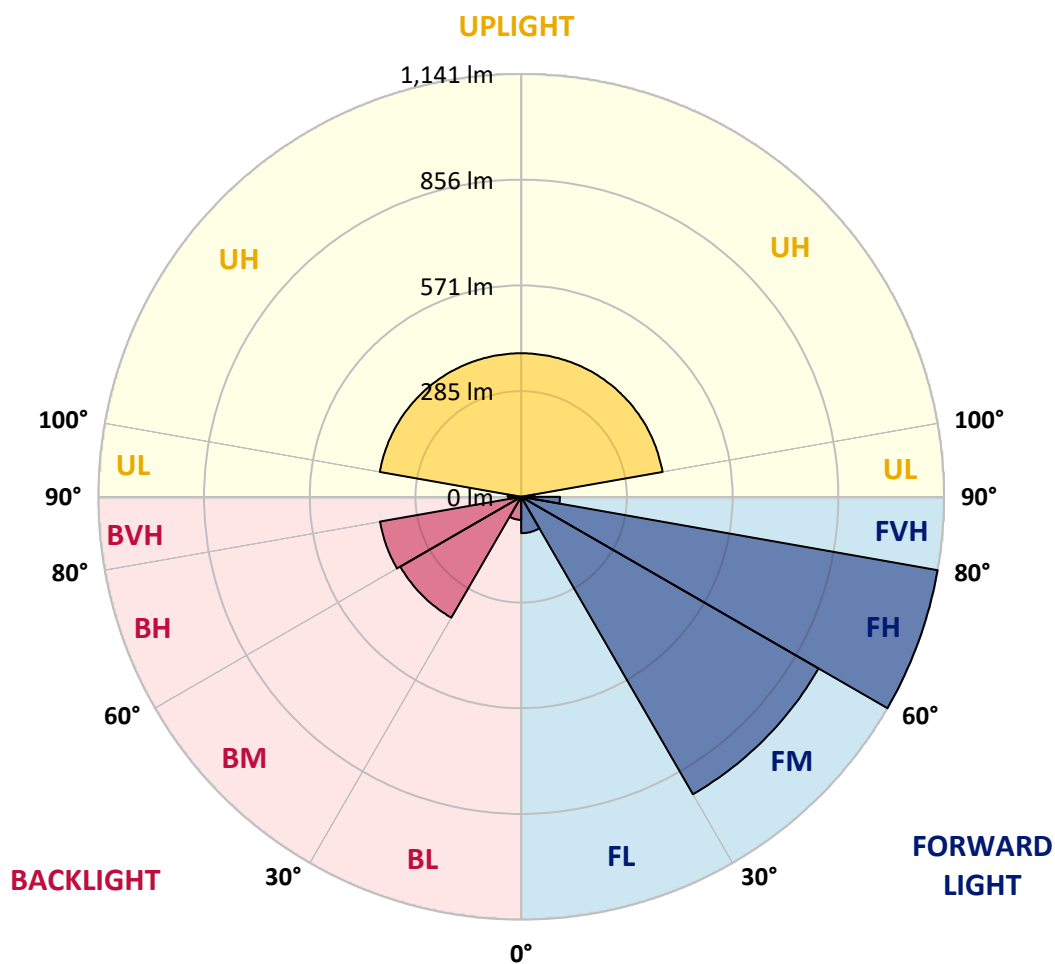
CATALOG NUMBER: TT-C1-LED-E1-DL-CG-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	98.2	2.5			
FM	(30°-60°)	926.9	23.6			
FH	(60°-80°)	1141.1	29.0			G1/1800
FVH	(80°-90°)	104.7	2.7			G2/225
BL	(0°-30°)	62.3	1.6	B0/110		
BM	(30°-60°)	376.6	9.6	B1/1000		
BH	(60°-80°)	386.8	9.8	B1/500		G1/500
BVH	(80°-90°)	33.7	0.9			G1/100
UL	(90°-100°)	36.3	0.9		U2/50	
UH	(100°-180°)	387.3	9.9		U3/500	

BUG Rating: B1-U4-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7
2.5°	135.7	135.7	135.7	135.2	134.6	134.0	134.0	133.4	132.8	132.2	131.0
5°	144.0	143.4	143.4	142.2	141.6	140.4	140.4	139.3	137.5	135.7	134.0
7.5°	152.8	153.4	152.8	151.6	149.8	148.7	148.1	145.7	143.4	140.4	137.5
10°	163.4	163.9	163.9	162.8	161.0	158.1	158.1	154.5	151.0	147.5	142.2
12.5°	178.6	178.1	177.5	177.5	173.9	170.4	171.6	166.9	161.0	155.7	149.3
15°	192.7	193.9	195.1	192.2	189.8	186.3	185.7	179.8	173.4	165.7	157.5
17.5°	213.3	214.5	213.9	212.7	209.8	205.7	204.5	197.4	188.6	178.1	166.9
20°	239.8	240.3	238.0	236.8	234.5	229.2	227.4	219.2	207.4	192.7	179.2
22.5°	269.1	267.4	266.8	265.6	265.0	259.1	258.6	246.2	229.2	212.7	193.3
25°	294.4	296.2	297.3	299.1	298.5	292.6	292.6	278.5	258.0	235.6	211.0
27.5°	323.8	326.7	330.2	334.4	333.8	329.7	332.0	318.5	290.9	263.8	232.1
30°	355.5	360.2	366.1	376.1	379.0	374.9	374.9	357.9	330.8	294.4	255.6
32.5°	397.8	400.2	405.5	421.3	430.1	430.1	429.6	410.8	377.8	332.0	283.8
35°	441.9	442.5	456.6	476.0	487.1	496.0	491.8	473.6	436.6	380.2	319.7
37.5°	487.1	487.7	507.7	530.6	555.9	562.9	566.5	550.0	502.4	433.7	359.0
40°	532.4	540.0	563.5	595.3	632.9	647.0	645.2	630.5	573.5	492.4	401.9
42.5°	578.2	594.1	618.2	667.0	711.6	734.5	735.7	722.8	662.8	569.4	457.8
45°	632.9	642.9	679.9	736.3	800.4	830.3	833.3	827.4	771.0	663.4	524.8
47.5°	689.9	699.3	743.9	815.0	895.0	955.5	960.8	955.5	885.6	742.8	584.7
50°	752.2	755.7	809.2	904.4	1020.1	1086.5	1090.1	1092.4	997.8	845.0	642.9
52.5°	810.3	811.5	880.3	1004.8	1152.9	1235.8	1239.9	1235.2	1160.6	973.1	752.2
55°	867.9	869.1	956.1	1120.0	1295.7	1398.6	1424.4	1426.8	1291.6	1055.4	781.5
57.5°	921.4	926.7	1045.4	1234.6	1456.7	1598.4	1596.6	1557.2	1368.6	1086.5	788.0
60°	969.6	986.6	1130.6	1363.3	1587.2	1680.6	1690.0	1603.6	1395.6	1100.0	782.7
62.5°	1010.7	1029.5	1211.1	1465.5	1668.9	1724.1	1720.6	1622.4	1433.8	1147.1	817.4
65°	1043.6	1070.7	1268.7	1516.1	1686.5	1740.6	1740.0	1669.5	1474.4	1157.0	803.3
67.5°	1061.8	1103.6	1277.5	1517.3	1673.0	1695.9	1687.7	1600.1	1398.6	1093.0	735.1
70°	1071.8	1098.9	1256.4	1450.3	1556.6	1550.2	1551.9	1445.6	1268.1	986.0	653.4
72.5°	1035.4	1057.7	1168.2	1305.7	1375.6	1342.7	1358.0	1260.5	1102.4	840.9	550.6
75°	944.9	955.5	1009.0	1096.5	1134.1	1111.8	1111.8	1041.3	889.7	689.9	444.8
77.5°	791.0	794.5	815.0	862.1	872.6	866.2	864.4	803.9	682.8	527.1	332.6
80°	565.3	578.2	587.0	607.6	629.9	620.5	608.2	559.4	477.7	360.8	229.2
82.5°	350.8	352.0	360.8	374.3	377.8	390.2	388.4	349.6	288.5	215.7	134.0
85°	163.9	161.0	169.2	178.6	183.9	183.3	187.5	168.6	133.4	98.7	61.1
87.5°	25.9	36.4	38.8	38.2	42.3	42.9	44.7	40.5	27.6	19.4	14.7
90°	36.0	36.0	36.0	34.0	29.0	26.2	26.0	28.0	32.0	34.0	34.0
92.5°	40.0	39.0	38.0	34.0	29.0	27.0	27.0	28.0	32.0	35.0	36.0
95°	44.0	43.0	41.0	36.0	32.0	30.2	30.0	30.0	34.0	37.0	39.0
97.5°	42.0	42.0	40.0	37.0	35.0	33.2	33.0	33.0	34.0	36.0	36.0
100°	45.0	45.0	44.0	40.0	38.0	36.0	36.0	36.0	38.0	38.0	37.0
102.5°	51.0	51.0	49.0	46.0	44.0	42.0	42.0	43.0	44.0	42.0	41.0
105°	60.0	60.0	57.0	54.0	53.0	51.8	52.0	54.0	53.0	49.0	48.0
107.5°	72.0	72.0	70.0	67.0	66.0	67.6	68.0	68.0	66.0	60.0	59.0
110°	86.0	86.0	89.0	85.0	86.0	86.8	87.0	84.0	84.0	78.0	74.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	101.0	102.0	108.0	107.0	110.0	107.2	107.0	102.0	105.0	100.0	95.0
115°	121.0	122.0	128.0	128.0	129.0	124.4	124.0	121.0	125.0	123.0	116.0
117.5°	140.0	141.0	144.0	141.0	141.0	136.4	136.0	138.0	141.0	139.0	133.0
120°	152.0	153.0	155.0	149.0	149.0	147.0	147.0	150.0	153.0	148.0	145.0
122.5°	161.0	162.0	164.0	154.0	155.0	157.6	158.0	159.0	162.0	155.0	153.0
125°	169.0	169.0	172.0	163.0	165.0	167.6	168.0	167.0	168.0	163.0	160.0
127.5°	177.0	177.0	181.0	171.0	176.0	177.8	178.0	176.0	175.0	173.0	166.0
130°	187.0	188.0	191.0	179.0	186.0	186.2	186.0	183.0	183.0	184.0	171.0
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	195.0	190.0	192.0	192.0	179.0
135°	210.0	210.0	209.0	192.0	199.0	201.2	201.0	196.0	201.0	199.0	185.0
137.5°	221.0	219.0	213.0	197.0	205.0	207.8	208.0	203.0	210.0	204.0	191.0
140°	229.0	226.0	216.0	200.0	207.0	212.4	213.0	212.0	217.0	209.0	195.0
142.5°	235.0	231.0	218.0	201.0	208.0	216.8	218.0	220.0	223.0	211.0	198.0
145°	235.0	230.0	218.0	202.0	211.0	221.4	223.0	230.0	227.0	211.0	201.0
147.5°	230.0	227.0	219.0	207.0	216.0	227.2	229.0	239.0	229.0	212.0	204.0
150°	224.0	221.0	220.0	214.0	222.0	233.4	235.0	242.0	232.0	214.0	210.0
152.5°	216.0	214.0	221.0	220.0	230.0	239.6	241.0	242.0	235.0	219.0	215.0
155°	208.0	207.0	219.0	224.0	237.0	242.2	243.0	238.0	234.0	224.0	220.0
157.5°	203.0	203.0	216.0	224.0	234.0	234.4	235.0	228.0	229.0	226.0	222.0
160°	199.0	198.0	210.0	213.0	219.0	218.4	219.0	215.0	219.0	221.0	218.0
162.5°	185.0	184.0	193.0	193.0	198.0	197.4	198.0	196.0	200.0	204.0	207.0
165°	169.0	167.0	173.0	173.0	176.0	176.4	177.0	176.0	181.0	185.0	190.0
167.5°	154.0	152.0	156.0	155.0	159.0	158.6	159.0	160.0	165.0	168.0	172.0
170°	142.0	141.0	145.0	144.0	147.0	146.8	147.0	148.0	152.0	155.0	159.0
172.5°	137.0	135.0	139.0	138.0	141.0	140.8	141.0	141.0	145.0	146.0	149.0
175°	136.0	134.0	137.0	137.0	139.0	138.8	139.0	138.0	141.0	141.0	143.0
177.5°	137.0	136.0	139.0	138.0	140.0	139.0	139.0	138.0	140.0	140.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

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CATALOG NUMBER: TT-C1-LED-E1-DL-CG-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7	128.7
2.5°	130.5	130.5	129.3	128.1	126.9	126.3	125.8	125.2	125.2	124.6	124.6
5°	133.4	132.2	130.5	128.7	126.9	125.8	124.6	124.0	122.8	122.2	122.2
7.5°	135.7	134.6	131.6	129.3	126.9	125.2	123.4	122.2	121.6	121.1	121.1
10°	140.4	138.1	134.6	130.5	127.5	125.2	123.4	122.2	121.6	121.1	121.1
12.5°	146.9	143.4	137.5	133.4	129.3	126.3	124.6	123.4	122.2	122.2	121.6
15°	154.0	149.8	142.8	136.3	131.6	128.7	126.3	125.8	124.6	124.6	124.6
17.5°	162.2	157.5	148.7	141.0	135.7	132.2	129.9	128.7	128.1	128.7	129.3
20°	172.8	166.3	155.1	146.9	140.4	136.9	135.2	133.4	133.4	134.6	134.6
22.5°	185.1	177.5	163.9	154.0	147.5	142.8	141.6	140.4	139.9	141.0	141.0
25°	198.0	189.2	173.4	162.2	154.5	150.4	149.3	148.1	148.7	149.3	147.5
27.5°	218.0	205.7	185.1	172.2	163.4	159.2	157.5	156.9	157.5	158.1	156.9
30°	236.8	222.1	199.2	183.9	172.8	168.6	166.9	166.9	167.5	167.5	167.5
32.5°	262.7	244.5	215.1	196.9	185.7	180.4	179.8	179.8	178.6	179.2	178.6
35°	293.2	271.5	236.8	214.5	201.6	195.7	193.9	192.7	192.7	192.7	192.7
37.5°	326.1	299.7	259.1	234.5	219.8	212.7	209.2	207.4	208.0	208.0	206.8
40°	363.2	332.6	285.6	255.0	241.5	230.9	226.8	225.1	224.5	223.3	220.4
42.5°	412.5	373.7	317.9	281.5	261.5	253.9	246.2	242.7	239.8	239.2	234.5
45°	470.7	429.0	359.6	319.1	292.6	275.6	268.0	262.1	256.8	255.0	251.5
47.5°	518.9	468.3	396.7	351.4	322.0	304.4	292.1	283.2	276.2	272.1	273.2
50°	572.9	516.5	439.0	382.0	353.2	334.4	322.6	307.9	297.3	290.9	293.2
52.5°	661.7	598.8	497.7	434.8	385.5	366.7	351.4	334.4	320.3	311.4	316.1
55°	686.4	620.5	525.9	468.3	430.1	409.6	386.7	365.5	345.5	333.8	333.8
57.5°	685.2	618.8	528.3	477.7	455.4	440.7	423.7	397.2	371.4	354.3	353.2
60°	676.4	610.0	522.4	471.3	454.2	457.2	450.1	427.8	397.2	373.7	370.2
62.5°	699.3	631.7	537.7	477.7	453.1	456.0	461.9	448.9	419.0	389.6	386.1
65°	684.6	616.4	525.3	473.0	459.5	460.1	464.2	454.8	430.7	403.7	397.8
67.5°	624.7	564.7	483.6	438.4	429.6	440.1	453.1	450.1	429.6	411.3	404.3
70°	548.8	496.0	426.6	389.0	382.5	397.8	419.6	423.7	417.8	406.1	403.7
72.5°	464.8	418.4	359.6	331.4	329.1	340.8	362.6	376.7	380.8	386.1	386.1
75°	373.1	336.7	286.2	266.8	266.8	279.7	297.3	315.6	326.7	340.8	344.9
77.5°	283.2	251.5	215.7	199.2	199.2	211.0	224.5	239.2	258.0	277.4	274.4
80°	193.9	173.4	147.5	139.3	137.5	144.0	155.7	165.7	182.2	195.1	202.7
82.5°	111.1	104.0	88.7	81.7	81.1	89.3	97.5	98.7	109.9	117.5	119.9
85°	52.9	46.4	43.5	38.8	39.4	41.1	44.1	46.4	49.4	52.3	52.3
87.5°	11.8	11.2	10.0	10.6	10.6	9.4	10.6	10.0	11.2	11.8	10.6
90°	34.0	34.0	34.0	32.0	27.0	21.0	25.0	30.0	33.0	34.0	34.0
92.5°	36.0	35.0	33.0	31.0	27.0	23.0	25.0	29.0	34.0	36.0	36.0
95°	38.0	38.0	35.0	33.0	29.0	26.0	27.0	31.0	34.0	35.0	36.0
97.5°	36.0	35.0	35.0	34.0	30.0	25.0	26.0	30.0	33.0	35.0	35.0
100°	37.0	37.0	38.0	38.0	33.0	27.0	28.0	32.0	35.0	36.0	36.0
102.5°	41.0	42.0	43.0	45.0	39.0	32.0	33.0	35.0	38.0	40.0	41.0
105°	49.0	49.0	52.0	54.0	48.0	39.0	38.0	41.0	44.0	48.0	49.0
107.5°	60.0	61.0	65.0	65.0	58.0	50.0	47.0	50.0	54.0	60.0	61.0
110°	75.0	77.0	78.0	75.0	71.0	65.0	60.0	62.0	67.0	73.0	74.0

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CATALOG NUMBER: TT-C1-LED-E1-DL-CG-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	94.0	94.0	91.0	86.0	84.0	82.0	77.0	80.0	85.0	87.0	87.0
115°	113.0	111.0	104.0	100.0	99.0	102.0	99.0	103.0	106.0	102.0	102.0
117.5°	129.0	128.0	121.0	117.0	116.0	120.0	121.0	125.0	125.0	120.0	120.0
120°	142.0	142.0	137.0	134.0	134.0	137.0	137.0	139.0	139.0	134.0	136.0
122.5°	150.0	153.0	151.0	148.0	149.0	149.0	145.0	148.0	149.0	145.0	146.0
125°	158.0	162.0	162.0	159.0	160.0	159.0	149.0	154.0	156.0	154.0	154.0
127.5°	163.0	169.0	170.0	168.0	168.0	169.0	154.0	158.0	163.0	160.0	161.0
130°	169.0	176.0	178.0	174.0	175.0	175.0	159.0	164.0	169.0	164.0	167.0
132.5°	176.0	182.0	186.0	181.0	183.0	181.0	165.0	171.0	176.0	171.0	174.0
135°	184.0	190.0	195.0	190.0	191.0	187.0	170.0	177.0	184.0	179.0	179.0
137.5°	190.0	196.0	204.0	200.0	199.0	191.0	175.0	182.0	192.0	187.0	187.0
140°	195.0	201.0	213.0	212.0	206.0	195.0	180.0	186.0	200.0	195.0	196.0
142.5°	198.0	204.0	220.0	222.0	212.0	197.0	184.0	190.0	205.0	204.0	205.0
145°	202.0	208.0	225.0	230.0	216.0	199.0	187.0	193.0	208.0	211.0	214.0
147.5°	206.0	212.0	230.0	236.0	219.0	202.0	191.0	195.0	212.0	220.0	225.0
150°	211.0	216.0	231.0	235.0	219.0	205.0	194.0	199.0	215.0	227.0	233.0
152.5°	216.0	220.0	229.0	230.0	220.0	208.0	201.0	205.0	219.0	232.0	239.0
155°	219.0	221.0	224.0	222.0	220.0	213.0	208.0	212.0	224.0	234.0	240.0
157.5°	219.0	219.0	216.0	213.0	216.0	219.0	215.0	220.0	229.0	232.0	235.0
160°	215.0	214.0	210.0	208.0	213.0	223.0	224.0	228.0	233.0	229.0	232.0
162.5°	207.0	207.0	204.0	204.0	209.0	221.0	227.0	231.0	230.0	224.0	226.0
165°	192.0	194.0	196.0	198.0	203.0	212.0	216.0	219.0	220.0	215.0	217.0
167.5°	174.0	177.0	181.0	184.0	189.0	195.0	196.0	199.0	200.0	197.0	200.0
170°	160.0	163.0	166.0	168.0	172.0	177.0	178.0	180.0	181.0	178.0	181.0
172.5°	151.0	153.0	155.0	156.0	159.0	162.0	162.0	164.0	165.0	163.0	166.0
175°	144.0	146.0	147.0	148.0	149.0	151.0	151.0	152.0	153.0	151.0	153.0
177.5°	141.0	142.0	142.0	142.0	143.0	144.0	143.0	144.0	145.0	143.0	145.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)